CLAIMS

1. A spraying apparatus for charging, in expanded form, fibers from at least one bundle of fibers taken from at least one roving, the apparatus comprising a portable tool having a manual gripping element, the portable tool comprising:

a nozzle for spraying the fibers of the at least one bundle;

an air supply device connected for supplying air to the nozzle so as to expand fibers of a bundle therein;

an extraction system configured to hold the at least one bundle and feed the at least one bundle to the nozzle; and

an inlet guide positioned to guide the at least one bundle to the extraction system.

2. The apparatus according to Claim 1, wherein the extraction system comprises two cylindrical rollers rotating in opposite directions and between which the at least one bundle can pass while being pinched therebetween.

3. The apparatus according to Claim 2, wherein the extraction system further comprises an outlet guide arranged adjacent the rollers, at a position to take up the bundle leaving the rollers.

4. The apparatus according to Claim 4, including a pneumatic motor connected to drive the rollers of the extraction system.

5. The apparatus according to Claim 4, wherein the spraying apparatus has the form of a gun whose handle comprises the holding element and houses the pneumatic motor.

6. The apparatus according to Claim 4, wherein the air supply is connected to supply air to drive the pneumatic motor.

7. The apparatus according to Claim 1, wherein the roving is in a basket.

8. The apparatus according to Claim 1, wherein at least part of said inlet guide is placed outside of said tool.

9. The apparatus according to claim 8, wherein the inlet guide comprises a flexible tube.

10. The apparatus according to Claim 8, wherein the inlet guide comprises at least one eyelet.

11. The apparatus according to Claim 1, further comprising a debundling system including a spreader bar.

12. The apparatus according to Claim 4, further comprising means for recovering air

which has been exhausted from the pneumatic motor.

13. The apparatus according to Claim 12, wherein the air-recovery means comprises a duct which connects to an exhaust of the pneumatic motor and opens laterally to the outlet guide.

14. The apparatus according to Claim 1, wherein the at least one bundle of the roving is formed of a plurality of filaments.

15. The apparatus according to Claim 1, wherein said inlet guide comprises a row of eyelets arranged along an axis parallel to an axes of rotation of the rollers for guiding a plurality of said bundles.

16. The apparatus according to Claim 1, wherein said air supply device is connected for supplying air to the nozzle in a direction transverse to a direction of movement of the at least one bundle therein.

17. The apparatus according to Claim 6, further comprising means for controlling proportions of the air supplied to the nozzle and to the pneumatic motor.

18. A method for spraying expanded fibers, comprising the steps of:

feeding at least one bundle of fibers from at least one roving;

introducing said at least one bundle into a portable tool having a manual gripping element, a spray nozzle, an air supply device connected for supplying air to the nozzle, an extraction system configured to hold the at least one bundle and feed the at least one bundle to the nozzle, and an inlet guide positioned to guide the at least one bundle to the extraction system;

using the air supply device to expand the fibers of the at least one bundle in said spray nozzle, and spray the expanded fibers.

19. The method of Claim 18, wherein said feeding step comprises simultaneously feeding at least two of said bundles.

20. The method of Claim 18, wherein said fibers are glass fibers.

21. The method of Claim 18, wherein said fibers are thermoplastic fibers.

22. The method of Claim 18, wherein said expanding step comprises supplying air to the spray nozzle in a direction transverse to a direction of movement of a bundle therein.

23. The method of Claim 18, wherein said spraying step comprises filling a receiver with the sprayed fibers.